

**REPORT OF
THE GENERAL COUNSEL
OF THE
OFFICE OF COMPLIANCE
—
U.S. CONGRESS**

Investigation of the Health Effects of Irradiated Mail

Case Nos. OSH-0201, 0202

Gary Green
General Counsel

Michael R. Lemov
Senior Counsel

Cheryl Polydor
Mary Masulla
Attorneys

Stephen Mallinger
Industrial Hygienist

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Executive Summary

The irradiation of Congressional mail beginning in November 2001 followed the detection of anthrax spores in 16 Congressional offices. It represented the first use of the irradiation process to eradicate anthrax spores from the mail delivery system. Beginning in January 2002, when the United States Postal Service began delivering irradiated mail to Congressional offices, the Office of Compliance became aware of numerous employee complaints of adverse health symptoms apparently caused by contact with irradiated mail, including headaches, nausea, nose bleeds, rashes, eye and skin irritation and similar symptoms.

In February 2002, Senator Charles Grassley and two House of Representatives employees filed Requests for Inspection with the General Counsel of the Office of Compliance, seeking an investigation of the possible adverse health effects of irradiated mail, and the related decontamination of the Hart Senate Office Building. The General Counsel initiated an investigation based upon receipt of these requests. The General Counsel's investigation consisted of review of a redacted version of a report prepared for the House/Senate Legislative Mail Task Force by the National Institutes of Occupational Safety and Health ("NIOSH"); consultation with Dr. Laura Welch, Chief of the Section of Occupational and Environmental Medicine, Washington Hospital Center; Dr. Clifford Mitchell, Director, Occupational Medicine Program, Johns Hopkins University; the staff of the Occupational Safety and Health Administration ("OSHA") and the OSHA Salt Lake Technical Center. Additionally, we obtained information and assistance from the Library of Congress Health Services Office, the Attending Physician of the Capitol and officials of the U.S. Postal Service.

Our inspection team also conducted its own sampling of the chemical by-products of irradiated mail, both on Capitol Hill and at the U.S. Postal Service facilities where mail is irradiated and prepared for delivery to Congressional offices. Finally, the General Counsel conducted a survey of potentially affected employees, including review of two hundred fifteen (215) Contact Sheets provided to us by affected employees; a telephone survey; a re-survey reaching a majority of those employees, providing us with updated information; and evaluation of eighty-one (81) detailed medical questionnaires completed by employees at our request.

Our re-survey, conducted in May 2002, approximately three months after the original incidents, found that fifty-five (55) per cent of the employees who originally reported symptoms associated with irradiated mail continued to have symptoms. The symptoms were often milder, but they nonetheless persisted.

The General Counsel has concluded that handling irradiated mail for substantial periods of time may be the cause, or a contributing cause, of adverse health symptoms reported by a significant number of Legislative Branch employees. However, we do not have sufficient information at this time to reach any final conclusion on the specific cause or causes of such symptoms, or whether there is a serious health risk from extended periods of mail handling under existing working conditions. The accompanying report provides a detailed account of the progress of our investigation, as well as recommendations for certain additional studies of the mail, and interim precautions to limit employee exposure to irradiated mail pending completion of the additional studies. The Office of the General Counsel will report further on this investigation as we develop additional information.

I. Introduction

Delivery of mail to the Congress was suspended for almost three months, from October 2001 to January 2002, due to the detection of anthrax spores in 16 congressional offices. Before resuming delivery of the mail to Congress in January 2002, the United States Postal Service developed and implemented a new method to disinfect potentially contaminated mail through the use of large doses of irradiation. While irradiation had been successfully utilized for many years to disinfect food and medical devices, the irradiation of Congressional mail represented the first use of the process for the purpose of eradicating anthrax spores in the mail delivery system. This is the first time a large group of employees is being exposed to irradiated mail on a regular basis.

Shortly after the resumption of mail delivery to Congress, the Office of Compliance became aware of many employee complaints of adverse health symptoms apparently caused by irradiated mail. These included headaches, nausea, nose bleeds, rashes, itching skin and similar symptoms. This diversity of symptoms is typical in an occupational health investigation since individual employees have differing medical backgrounds.

We initiated a full investigation in an attempt to determine the health and safety effects of handling irradiated mail. Ultimately, we received over 215 documented reports of symptoms from employees of the Legislative Branch. We tested for the chemical by-products of irradiation, using the most effective equipment available. We considered other possible factors that could explain the reported symptoms. We consulted with other knowledgeable government agencies and retained the services of leading medical experts in occupational health and safety. This report represents our interim response to employers and employees of the Congress and other agencies regarding the safety of working with irradiated mail. It also represents, in part, the implementation of our responsibility under the Congressional Accountability Act to ensure a safe workplace for employees of the Legislative Branch.

The Congressional Accountability Act, passed by Congress in 1995, directs the General Counsel of the Office of Compliance (the "General Counsel") to inspect and investigate places of employment within the Legislative Branch upon written request of any covered employee or employing office. 2 U.S.C. 1341(c)(1). The General Counsel is given virtually the same investigative powers as the Secretary of Labor under the Occupational Safety and Health Act of 1970, (29 U.S.C. 657, "OSH Act"). The OSH Act, as incorporated in the CAA, thus affords all Legislative Branch employees the right to "...a place of employment free from recognized hazards that are causing or likely to cause death or serious physical harm to employees." OSH Act 29 U.S.C. 654(a)(1).

II. Requests for Safety and Health Inspection of Irradiated Mail

The General Counsel received requests for inspection regarding the health effects of handling irradiated mail on February 6, and February 26, 2002, from two House of Representative employees. The first employee's request form stated:

...the irradiated mail has been causing illnesses of Capitol Hill workers who open or handle large amounts of irradiated mail (illnesses range from feeling lightheaded, bleeding nose and ears, headaches, stomach aches, itchy skin/eyes and the like).

The second request stated:

Since the second week of January when the mail came in large quantities, I have been feeling symptoms of itchy eyes, sneezing, itchy skin, nausea, headaches and sinus congestion. After...I no longer had to open the mail my symptoms have not reappeared.

On February 11, 2002, the General Counsel received a request for inspection from Senator Charles E. Grassley stating:

As you know, at least 73 employees have reported symptoms such as headaches, skin rashes, dry mouth and eye irritation after handling irradiated mail. Also, between 50 and 60 employees in the Hart building have complained of dry eyes, dry throat and headaches.

A copy of the Senator Grassley's letter dated February 11, 2002 is Attachment A to this status report. In his inspection request, Senator Grassley included concerns about the possible adverse effects of the Hart Building decontamination process, in addition to irradiated mail. This report primarily addresses the status of our study of irradiated mail. The Hart Building investigation is discussed in Section V of our report.

III. General Counsel's Investigation.

Background

At the commencement of the investigation required by the Congressional Accountability Act, the General Counsel contacted the Sergeant at Arms of the Senate and the Chief Administrative Officer of the House of Representatives to obtain any information relevant to the Requests for Inspection. The Sergeant at Arms of the Senate stated that he had established a Legislative Mail Task Force, which was investigating the mail problem. The Task Force includes representatives from the Centers for Disease Control, Environmental Protection Agency, National Institutes of Occupational Safety and Health (NIOSH) and other agencies. The Sergeant

at Arms informed us that NIOSH was, at the request of the Task Force, preparing a report that would be shared with the Office of Compliance upon its completion.

NIOSH Report

The NIOSH report was released publicly on April 23, 2002 by the Legislative Mail Task Force in redacted form. It was furnished to the Office of Compliance in redacted form on the same day. NIOSH stated that on February 13, 14 and 15, 2002 it had measured the air in ten (10) Capitol Hill buildings for contaminants that could potentially come from irradiated mail. These were listed as carbon monoxide, volatile organic compounds, formaldehyde, ozone, polynuclear aromatic hydrocarbons, toluene, small particulate and total particulate. NIOSH also measured typical indoor air parameters such as carbon dioxide, temperature and relative humidity. NIOSH found that the sampled substances either were not detected, or were found at low levels, below those known to cause health problems. We do not know whether NIOSH tested for other potential chemical irritants which are by-products of irradiated mail. NIOSH reported that it interviewed 389 Legislative Branch employees regarding symptoms they were experiencing in connection with handling irradiated mail. The most commonly reported employee symptoms were headache, skin irritation, eye irritation, skin rash, dry hands, nausea and nose or throat irritation.

NIOSH concluded "...it is likely that multiple factors are responsible for the reported symptoms." See NIOSH Health Hazard Evaluation - Irradiated Mail Handling (April 2, 2002 at 34). NIOSH described the likely causal factors as:

- damage to the paper resulting from the irradiation process, which could account for the dry skin and skin irritation symptoms reported by employees
- odors which can trigger symptoms in some individuals
- heightened awareness and resultant employee stress from recent terrorist attacks.

The NIOSH report summary stated: "We did not find evidence suggesting the potential for long-term health effects from handling of irradiated mail."

Library of Congress Survey

We also worked with the Library of Congress in the design of an environmental and health study of Library employees handling irradiated mail. The Library requested volunteers for this study. One hundred and forty (140) employees volunteered for a base line survey prior to receipt of any irradiated mail. The Library utilized as a base-line a medical examination including pulmonary, blood and EKG tests as well as a survey questionnaire. The Library also conducted follow-up examinations of approximately 110 employees subsequent to the initiation of mail delivery to the Library. Library officials have advised us that they have not completed their survey. Preliminary results indicate that the number of complaints which appear to be related to the handling of irradiated mail has declined in the last several weeks, but that further

investigation may be warranted. We are appreciative of the cooperation of the Library and Dr. Sandra Charles, Director of Health Services. We look forward to receiving the results of the survey from the Library.

In conducting our own investigation, we carefully reviewed the NIOSH report. We conducted interviews with the agencies and officials involved, sampled air quality and potential dermal effects of handling irradiated mail and consulted with leading experts in the field of occupational and environmental health and safety. We consulted with Dr. Laura Welch, Chief of the Section of Occupational and Environmental Medicine, Washington Hospital Center; Dr. Clifford Mitchell Director, Occupational Medicine Program, Division of Occupational Health, Johns Hopkins University; the staff of the Occupational Safety and Health Administration and the staff of the OSHA Salt Lake Technical Center. We also met or spoke with the Attending Physician of the Capitol, the Library of Congress Health Services Office and officials of the U.S. Postal Service. We also completed our own survey of potentially affected employees.

Office of Compliance - Legislative Branch Employee Survey

Within a day of our receipt of the first Request for Inspection, the Office of Compliance posted on its website, at www.compliance.gov, a Contact Information Sheet seeking relevant information from other affected employees. Then, beginning in February and continuing through March 2002, we sent directly, by internal mail, approximately 14,000 Contact Information Sheets to all House and Senate employees and all employing offices, including House and Senate Committees. The Contact Sheets were also sent to other instrumentalities of the Legislative Branch. A copy of the Contact Information Sheet, with the General Counsel's February 21, 2002 explanatory memorandum printed on the reverse side, is Attachment B to this report.

Two hundred fifteen (215) Legislative Branch employees responded by completing and submitting Contact Information Sheets. Many of these employees were thereafter contacted by telephone to obtain their answers to a more detailed survey regarding symptoms and working conditions. One hundred forty-eight (148) employees responded to this telephone survey. Many responders indicated that they were responding on behalf of several employees in a particular office, rather than a single employee. In addition, we noted in our survey a general reluctance by Legislative Branch employees to complain about working conditions and difficulties encountered in performing their assignments. Employees of the Legislative Branch appear to be motivated by loyalty and commitment to their employers and the institution. In light of these observations, the number of Contact Information Sheets we received was substantial. Finally, as we prepared to release this report, we conducted a re-survey of the employees who initially responded, and reached one hundred sixty-eight (168) employees with follow-up questions during May 2002.

We received completed Contact Information Sheets from House staff members representing 90 House member's offices and 15 committees, and 67 Contact Information Sheets

28, 2002, and the latest May 21, 2002.

Eighty-one (81) of the 83 respondents said that they handle the mail. Seventy (70) of the respondents said that they opened the mail.

The 81 respondents who handle mail were asked if they had experienced any of 24 symptoms in the past four weeks. Of these symptoms, there were eight that had occurred for at least 60% of the respondents. These are:

- Headaches (86%)
- Pain/Stiffness in the back/shoulders/neck (75%)
- Dry/Itching/Irritated eyes (72%)
- Sneezing (69%)
- Tired/Strained eyes (73%)
- Stuffy/Runny nose or sinus congestion (65%)
- Dry/Burning/Itching skin (64%)
- Sore/Dry/Irritated throat (63%)

The 81 respondents were then asked if these same symptoms were better, worse or the same when at home. For these eight primary symptoms, the percentage of people that said their symptoms got better while at home are:

- Headaches (77%)
- Pain/Stiffness in the back/shoulders/neck (45%)
- Dry/Itching/Irritated eyes (92%)
- Tired/Strained eyes (66%)
- Sneezing (60%)
- Stuffy/Runny nose or sinus congestion (54%)
- Sore/Dry/Irritated throat (65%)
- Dry/Burning/Itchy skin (62%)

The respondents were also asked if they had any of 14 pre-existing health conditions including asthma, hay fever, allergies and smoking. Thirty-four (34) respondents to the medical questionnaire, representing 41% of the total, indicated that they did not have any pre-existing health problems.

from Senate employees, representing 34 individual Senate offices and 13 committees. Eight Contact Information Sheets were returned by employees of other entities such as the Architect of the Capitol, the Senate Post Office and the Chief Administrative Office of the House. Those submitting completed questionnaires were advised that their identities would remain confidential and that only summary data would be released publicly.

The Contact Information Sheet and subsequent responses from our telephone survey, furnished the following information regarding symptoms experienced by the 215 responding employees. Many employees experienced multiple symptoms:

- 51% experienced headaches when handling mail
- 32% stated they had itching skin
- 23% experienced burning and red eyes
- 21% experienced nausea
- 15% indicated that they developed a visible rash
- 11% said that they are now getting bloody noses and did not have them before handling irradiated mail

In the follow-up telephone survey conducted in March and April 2002 we reached 148 employees who had sent us Contact Information Sheets:

- 72% of the respondents reported that they were still experiencing symptoms.
 - 37% of these respondents said that symptoms were experienced when they were handling mail and not otherwise.
 - 25% of these respondents said the symptoms were getting better.
 - 3% of these said the situation was getting worse.
 - 35% of these said the situation was the same.
- 28% of the respondents reported that they no longer were experiencing symptoms
 - 25% of them said they no longer handle mail, usually due to an adverse health reaction.
 - 42% of these said they still handle mail but are now symptom-free.

Medical Questionnaire

We also prepared a confidential medical questionnaire which we asked the respondents to our original survey to complete. To date, a total of 83 medical questionnaires have been completed and returned.

The primary information furnished by the medical questionnaire responses may be summarized as follows.

Eighty-three (83) people completed the medical questionnaire. The median date on which the questionnaires were filled out is March 15, 2002, with the earliest date being February

Office of Compliance - Re-Survey - Current Conditions

We updated our employee survey during May 2002. We re-surveyed by telephone all legislative branch employees who originally contacted us to report symptoms.

One hundred sixty-eight (168) respondents were reached by telephone in the re-survey. The results may be summarized as follows:

- 55% of the 168 respondents reported that they were still experiencing symptoms.
 - 22% of these respondents have had their duties changed with respect to handling mail.
 - 78% of these respondents have not had their duties changed with respect to mail.

- 38% of the respondents still experiencing symptoms said the symptoms were unchanged.
- 61% of these respondents said the symptoms were better.
- 1% of these respondents said the symptoms were worse.

- 45% of the 168 respondents reported that they no longer were experiencing symptoms
 - 20% of these respondents have had their duties changed with respect to handling mail.
 - 80% of these respondents have not had their duties changed with respect to mail.

In connection with all the employee surveys we conducted, we emphasize that the results do not represent a scientifically valid sampling of Legislative Branch employees, but only of those who elected to respond. Further, because of widespread publicity regarding anthrax exposure and mail handling symptoms, it is possible that many of the respondents were particularly sensitive to the problem of handling mail at the time they completed the initial Contact Information Sheet, during the call-back survey, in completing the medical questionnaire, and in our re-survey in May 2002.

In summary, our several surveys of the effects of handling irradiated mail disclosed that a substantial number of Legislative Branch employees handling the mail initially displayed significant adverse health symptoms. The number of employees affected has declined in recent weeks, as has the seriousness of the symptoms. Nonetheless, adverse employee health effects remain substantial.

Sampling and Testing of Legislative Mail

During February and March 2002, we conducted our own sampling of the chemical by-products of irradiated mail, using the most modern equipment available. With the assistance of

an industrial hygienist from OSHA's Health Response Team, we first collected air samples from the polyethylene bags that had been irradiated at a plant in Bridgeport, New Jersey, and at the Brentwood Post Office in Washington, D.C. Through evaluation of the air samples, we sought information about possible inhalation exposure. The results from the samples indicated the presence of low levels of several irritant chemicals, apparently produced from the paper during the irradiation process. In order to determine whether these chemical by-products were the cause of the employee complaints, we obtained additional air samples from the House and Senate mail rooms. We targeted the mail rooms because they are the sites where the highest exposure concentration of any residual chemicals left in the mail would be likely to reside. Again, our test results indicated the presence of low levels of irritant chemical by-products caused by irradiation of the mail.

In addition, several Congressional offices, including Senator Grassley's office, offered us samples of the paper mail they received so they could be chemically analyzed. We sought information about possible dermal exposure through sampling of the paper. Once again, the test results confirmed the presence of irritant chemical by-products at low levels. Sixty (60) blank "test" letters were then mailed to various participating Congressional offices, and 10 were sent directly to the OSHA laboratory to serve as "controls." After the 60 letters were irradiated and received (but not opened) at the various Congressional offices, those too were sent to the OSHA laboratory for evaluation. The methodology used by OSHA was chromatography and mass spectrometry. The results of this testing, like the previous testing, also indicated low concentrations of several chemicals produced as by-products of the irradiation process.

In sum, our testing has indicated the presence of certain irritant chemicals produced by the mail irradiation process, but we have not yet been able to quantify the amounts of such chemicals present in the mail upon its receipt in Congressional offices. Such quantification may require more sophisticated testing, because of the possibility that the by-products of irradiation dissipate over time. Given the number of Congressional employees that we found are still experiencing significant symptoms during our recent re-survey, as detailed above, we believe that additional testing is necessary to determine whether or not irritant chemicals, or other factors, are the likely cause of the reported employee symptoms.

Executive Branch Agencies

With the exception of a limited study of possible air contaminants done for the Office of Personnel Management ("OPM") by NIOSH, on January 22 and 23, 2002, we are not aware of any studies done to assess the possible effects of irradiated mail at Executive Branch agencies. During April and May 2002, at our request OSHA conducted an informal survey of employee complaints regarding the handling of irradiated mail at certain Executive Branch agencies. Some complaints of headaches, burning eyes, skin irritation and nausea were found at the 10 Executive Branch agencies surveyed, ranging in number from no complaints, but some inquiries, at the Commerce Department, to a total of twenty complaints at the State Department. We emphasize that OSHA conducted only an informal survey at our request, and not a scientific analysis of Executive Branch symptoms. There are many possible reasons for the differing results in different Executive Branch agencies, such as different processes for handling mail and different quantities of mail. Despite these information limitations, we provide the responses

OSHA obtained as background information to our analysis of the Legislative Branch. The results are summarized in Attachment C to this report.

IV. Decontamination of Hart Senate Office Building

In addition to Senator Grassley's request for an investigation of health complaints of Senate employees relating to irradiated mail, his request also referred to "between 50 and 60 employees in the Hart Building (who) have complained of dry eyes, dry throat and headaches." Based on the Senator's report of these general complaints by employees located in the Hart Building, as distinguished from complaints specifically relating to opening and handling mail, we sought to determine whether the more general complaints of symptoms may have been related to the decontamination process utilized in the Hart Building.

In response to Senator Grassley's request, we conducted air sampling in the Hart Building on February 15, 2002. The inspection was conducted by an industrial hygienist on the staff of the General Counsel, utilizing equipment and methodology approved by the Occupational Safety and Health Administration. We sampled for chemicals which would most likely be associated with the decontamination process, specifically, ozone, chlorine dioxide, carbon monoxide, and carbon dioxide. Our sampling did not reveal any levels of the sample chemicals that would represent a significant threat to the health and safety of Senate employees. It is noteworthy that a number of other events occurred at or around the time that the Hart Building was reopened in January 2002, such as painting, and installation of new carpet, in many areas. These events may account for some of the symptoms reported by employees. In addition, several weeks had elapsed between the re-opening of the Hart building and our air sampling on February 15.

We received very few complaints directly relating to the Hart Building decontamination process (as distinguished from the 215 complaints directly relating to the handling of irradiated mail). Since those few initial complaints came in, we have not received any additional complaints regarding decontamination of the Hart Building. Accordingly, the General Counsel intends to close this aspect of the investigation, in the absence of any further information from employers or employees which might indicate possible health risks associated with the decontamination process.

V. Observations Regarding our Investigation

Upon the written request by any covered employee or employing office of the Legislative Branch, the General Counsel of the Office of Compliance is required by the Congressional Accountability Act to investigate the health and safety of workplace conditions. We received such requests from a United States Senator and two House employees. Nonetheless, our investigation did not proceed as smoothly as we would have liked.

We sought an unredacted copy of the NIOSH study of irradiated mail from the Sergeant at Arms of the Senate - - who chairs the Legislative Mail Task Force - - on March 22, 2002. We agreed to maintain the confidentiality of the report by whatever means were deemed necessary by that Office. We never received an unredacted copy. We also asked to accompany the NIOSH team as they conducted their irradiated mail investigation commencing in February 2002. We

were not permitted to participate in this investigation. We did, however, speak with NIOSH staff on May 15, after the investigation was completed. However, our non-participation in the investigation and the failure to obtain an unredacted copy of the NIOSH report, made it more difficult for us to determine the chemical by-products of irradiation that NIOSH studied, other factors considered by NIOSH and what NIOSH found.

We asked the Office of the Attending Physician to share with us the results of a re-survey that office conducted of employees who had experienced adverse symptoms in connection with handling irradiated mail, subject to deletion of patient information. We wanted to compare our re-survey data with that of the Attending Physician. The Office of the Attending Physician has not shared that information with us (even with employee identities redacted) as of this date.

We also requested (in writing) that the National Oceanic and Atmospheric Administration, the Armed Forces Radiobiology Research Institute (AFRRI), the Defense Advanced Research Projects Agency and the United States Postal Service (USPS) meet with us in connection with our investigation. We requested assistance from these agencies because we understood that AFRRI had conducted research in support of the NIOSH study directed by the Legislative Mail Task Force, as had the Defense Advanced Research Projects Administration. We also understood that the National Oceanic and Atmospheric Administration had conducted research on mail problems at that agency. We never received a response to our requests for assistance from these agencies. We did engage in a conference call with an official of the USPS, which was quite helpful. We were advised that USPS believed there had been a problem with some “overdoses” of irradiation at the commencement of the mail irradiation process and that it had been corrected. However, the USPS official’s promise to arrange for a meeting with the other agencies referred to above, as well as with the White House Office of Science and Technology, was not fulfilled although we telephoned several times to request such a meeting.

The Chief Administrative Officer of the U.S. House of Representatives furnished, at our request, a copy of a report of an analysis by AFRRI of discoloration of gloves utilized by mail handlers. AFRRI attempted to extract mail related chemicals which might be affecting employees in the mail handling process.

The AFRRI study found that there were no detectable chemical by-products present in the gloves. However, the AFRRI report stated:

The absence of detected analytes does not indicate that mail-related chemicals were absent, but that any such analytes were not detectable using these methods. Additional work is underway to elucidate the mechanisms that could alter large polymeric compounds present in paper, such as cellulose... This work is ongoing and the remaining gloves could be useful once the mechanism of chemical alteration of cellulose (if any) is identified and analytes are known.

With the sampling methods used, no harmful contaminants were detected on the gloves.

While we believe we have reached appropriate conclusions in this report, our investigation might have been more effective and certainly would have been completed more promptly and efficiently, if we had not encountered a lack of cooperation by some agencies and officials.

VI. Potential Causes of Employee Symptoms.

Our investigation and testing of irradiated mail handling has not thus far established a single definitive cause, or causes, of the broad range of symptoms reported by Legislative Branch employees. We believe these symptoms are not insignificant, both in terms of the number of complaints and in the effect on employee health and work performance. The NIOSH report found that heightened awareness and resultant stress from the recent terrorist attacks may have contributed to employee symptoms. We believe this factor may have been a contributing cause, but our research persuades us that chemical irritants and other factors may also be contributing causes of the symptoms experienced by Legislative Branch employees.

Some of our tests have indicated the presence, at low levels, of several chemical by-products of irradiated mail that are definite irritants. These chemical by-products probably emanate from the cellulose contents of the paper mail which is broken down in the intense irradiation process. We have not yet been able to quantify the amounts of these by-products in the mail, possibly because of the unavoidable time lapse in obtaining our air and bulk mail samples and their receipt by the OSHA Salt Lake Technical Center for testing. While we do not believe these chemical irritants are life-threatening we believe further study is essential to determine the effects of extended exposure to irradiated mail, particularly in restricted work areas.

Based on our investigation thus far, and the statutory mandate of the Congressional Accountability Act we recommend at least three additional actions to assure the protection of Legislative Branch employees who handle irradiated mail.

- 1) Continued Monitoring. We believe it is essential that health professionals, either in the Office of the Attending Physician, or independent medical professionals, monitor on a regular basis those employees who report symptoms which they believe are based on handling of irradiated mail. The monitoring should continue until there is evidence that the symptoms reported have declined significantly. The results of this continued monitoring should be reported to the Office of the Attending Physician and simultaneously (using our Contact Information Sheets which are available on our website www.compliance.gov) to the Office of Compliance.
- 2) Additional Studies. We recommend certain additional studies designed to investigate the longer-term exposures to irradiated mail of Legislative Branch employees. These additional studies would focus primarily on the degree of exposure to irritant chemical by-products of irradiated mail which employees could face over typical work periods, in typical office settings on Capitol Hill.

They would also deal with varying levels of mail and different mail handling procedures. Such studies could probably be completed within a year, and could be performed by outside testing organizations under contract to the Office of Compliance. Such studies are beyond current Office of Compliance resources and would require approval of additional funding by Congress. (See Section VII below).

- 3) Basic Interim Precautions. We also recommend that certain basic interim precautions be taken by employers and employees who handle mail on a regular basis. These interim steps would be designed to minimize any possible health risk which might be found in the future from the long term handling of irradiated mail. (See Section VIII below).

Further discussion of our recommended actions is contained in the following two sections of this report.

VII. Additional Studies Recommended.

We believe, as already indicated, that additional studies are necessary to investigate the safety of handling irradiated mail. Both Dr. Laura Welch and Dr. Clifford Mitchell, who are experts in occupational medicine, concur in this evaluation.

The studies we recommend should include:

- A) Consideration of a medical study of employees who display continued symptoms from handling mail, to attempt to better characterize potential causes.
- B) A workplace exposure assessment to determine if chemical by-products present in the mail, or other factors, could represent a serious health hazard to employees under specific exposure conditions.
- C) Development of additional data on the physical and chemical properties involved in irradiation of mail and their possible effect on Legislative Branch employees.

VIII. Interim Steps.

While the additional studies we recommend are in process, we suggest that Legislative Branch employees handling irradiated mail take some basic precautions to limit exposure. Employing agencies should, we believe, implement the following:

- A) Employees who manifest symptoms which appear to be related to mail handling should obtain a medical evaluation and should determine whether to wear gloves in consultation with a physician. If the determination is made to wear gloves by employees, the gloves should preferably be non-latex. Legislative Branch employers should make appropriate gloves available.
- B) The mail should be thoroughly aired-out, probably by the U.S. Postal Service, prior to transmission to legislative offices. This airing-out period should not be truncated by understandable pressure to deliver constituents' mail promptly.

- C) Employees should wash hands thoroughly after they complete mail handling duties, preferably using moisturizing lotion after washing.
- D) Employees should handle mail in well-ventilated areas.
- E) Where employees display continued symptoms from exposure to irradiated mail, consideration should be given to reducing their exposure.
- F) If employees experience symptoms such as those we found in the course of our investigation, they should report these symptoms to the health offices of their Legislative Branch organizations, and separately forward this information to the Office of Compliance. (using the Office of Compliance Contact Information Sheet, found on the OOC website at www.compliance.gov)

Conclusion

Handling irradiated mail for substantial periods of time may be the cause of adverse health symptoms in a significant number of Legislative Branch employees. These symptoms have continued to be evident in a recent re-survey by the Office of Compliance, although the number of affected employees and the severity of symptoms has declined. We do not currently have enough information to reach any final conclusion on whether there is any serious health risk from extended periods of mail handling under existing working conditions. We do recommend that additional studies such as those discussed in Section VII be undertaken in order to attempt to reach a firm conclusion on any health risks to which employees might be exposed. We believe these studies are essential to safeguard the right of covered employees to work in a place free from recognized hazards that are causing or are likely to cause serious physical harm.

Pending the results of further irradiated mail studies, we recommend that employers and employees take some basic precautions, such as wearing protective gloves if they display symptoms when handling irradiated mail and, in general, reducing exposure when symptoms are present by limiting the amount of time individual employees expend in mail handling.

The General Counsel and the Office of Compliance will report further on this investigation as we develop additional information.

ATTACHMENTS:

- A - Senator Grassley's Request for Investigation - February 11, 2002
- B - General Counsel's Memorandum & Contact Information Sheet - February 21, 2002
- C - Survey of Selected Executive Branch Agencies Conducted by OSHA - April/May 2002.

Survey of Selected Executive Branch Agencies
Conducted by OSHA - April-May 2002

Department _____ Mail Complaints _____

Agriculture - Two complaints of acute skin irritation (per health unit).

Commerce - A few inquiries.

HHS - Two inquiries, no complaints.
Timing: At beginning of irradiation effort
Symptoms: Burning eyes, some concern regarding residue on surfaces they touched.

HUD - A few inquiries, no complaints.

Interior - More than twelve complaints.
Timing: Since beginning of irradiated mail deliveries until now
Symptoms: Puffy eyes, headaches, nausea, itchy skin (no rashes seen)

Justice - Four complaints.
Timing: All in past month.
Symptoms: Puffy eyes, itchy skin on hands.

Labor - No complaints filed with the Baltimore-DC Area Office, Norfolk Area Office, or Philadelphia Office (Region III)..

State - More than twenty complaints.
Timing: All at beginning of process (Note: just received large shipment of mail that was high load and thus was given higher dose, yet no complaints).
Symptoms: Raspy throats, itchy eyes, headaches.

Treasury - No complaints, just inquiries regarding crunchy papers and melted plastic.

VA - Six contacts including three serious inquiries. Three complaints of ill health.
Timing: When irradiated mail first distributed. Last six weeks have been quiet.
Symptoms: Lightheadedness, dizziness, nausea, itchy skin.